Rec'd PCT 2 7 MAY 2005

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squeezing the outer receptacle by hand, whereupon the receptacle will reassume its initial shape after pressure compensation has been carried out between the innerREPLACED BY bag and the outer receptacle.

ART 34 AMDT

In the receptacle according to DE 41 39 555 C2, pressure compensation which is required due to the volume reduction of the inner bag entailed by the discharge of the receptacle contents is carried out through unwelded shoulder seams of the outer receptacle. This may entail problems when a pump is mounted. Furthermore, only receptacles with shoulder sections can be provided with such pressure compensating seams whereas this is not possible in so-called wide-necked containers in the described way.

DE 197 37 946 C2 discloses a method for producing a receptacle comprising at least one pressure compensating opening, wherein a knife which impinges at a flat angle on a curved circumferential section of the outer receptacle cuts away a chip from the outer wall, whereby an approximately elliptical or lenticular cutting surface is formed with a hole leading through the wall of the outer receptacle. Although the knife impinges on the inner bag after having penetrated through the wall of the outer receptacle, this takes place at such a flat angle that the inner bag will recede without any damage.

In practice this method has turned out to be useful, but shows the drawback that a relatively large cutting surface is formed which might give a user the impression that the receptacle is damaged when the opening is not covered by a pump housing.

It is therefore the object of the present invention to provide a method with which the at least one pressure compensating opening can be formed in an easy way and is hardly noticed.

According to the invention this object is achieved by the features of patent claim 1.



Patent Claims

1. A method for producing a receptacle consisting of a substantially stiff outer receptacle and an easily deformable inner bag which are made from respectively different thermoplastic materials that do not form a welded joint with one another, said receptacle comprising a receptacle opening and at least one wall opening provided in the outer receptacle, through which pressure is compensated in the area between the inner bag and the outer receptacle, with a parison, which consists of at least two tubings, being coextruded and arranged between the opened halves of a blow mold, the blow mold being subsequently closed when said parison has reached the length required for producing said receptacle, excess material being squeezed off in the bottom area of the receptacle to be produced, and a web made of welded material of said outer receptacle being formed, in which web the welded bottom seam of the inner bag is clamped and held in axial direction, and said parison being inflated by a pressure medium for contact with the wall of the blow mold and removed from said blow mold.

characterized In

that the at least one wall opening is formed by an oscillating tool.

- 2. The method according to claim 1, characterized in that said tool oscillates at about 10,000 to 20,000 oscillations/minute.
- The method according to claim 1 or 2, characterized in that said tool is a saw blade provided with teeth or is a diamond-studded separating tool.



- 4. The method according to any one of claims 1 to 3, characterized in that the wall opening has the shape of an elongated slit with parallel boundary walls or has the shape of an arc.
- 5. A receptacle consisting of a substantially stiff outer receptacle and an easily deformable inner bag which are made from respectively different thermoplastic materials that do not form a welded joint with one another, sald receptacle comprising a receptacle opening and at least one wall opening provided in the outer receptacle, through which pressure is compensated in the area between the inner bag and the outer receptacle, said outer receptacle having a bottom in which the weld seam of said inner bag is clamped, characterized in that said at least one wall opening has the shape of a slit with parailel boundary walls.
- 6. The receptacle according to claim 5, characterized in that the inner bag consists of PE or a PE-based ionomer or of a multilayered material combination, and the outer receptacle consists of PET.